

CAFS On-Line Orientation

*Montgomery County
Fire & Rescue Service*



Operating the CAFS Controllers



Controllers

Module Objectives

- Understand FoamLogix Controller Layout
- Understand FoamLogix Injection Use
- Understand CAFSPro Controller Layout
- Understand CAFSPro Injection Use



FoamLogix and CAFSPro Controllers

- **FoamLogix**
Concentrate
Injection
Control



CAFSPro
Air Injection
Control



Controllers

- Both are laid out in similar fashion. On/off button in upper left. Informational display change button in upper right. Arrows control amount of foam or air added. Bar scale across bottom gives visual representation of percent capacity used.



FoamLogix Controller



- On/Off Button



- Switch Displays Button

- Up and Down Arrows

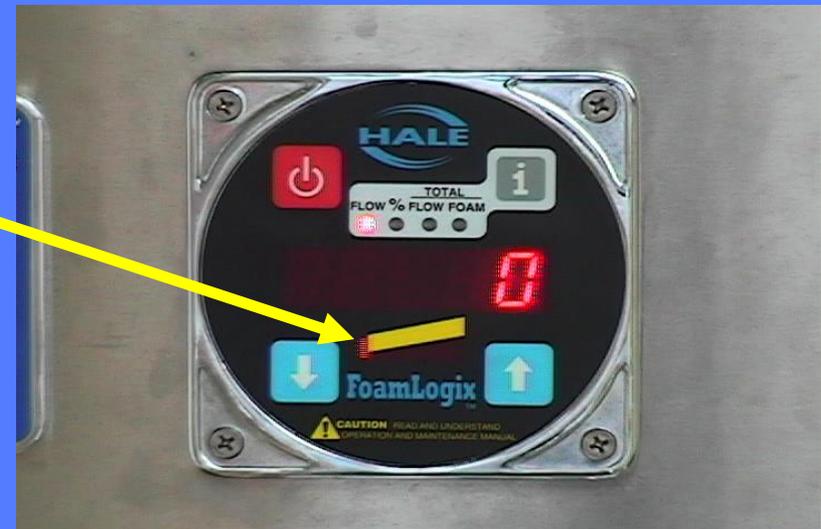
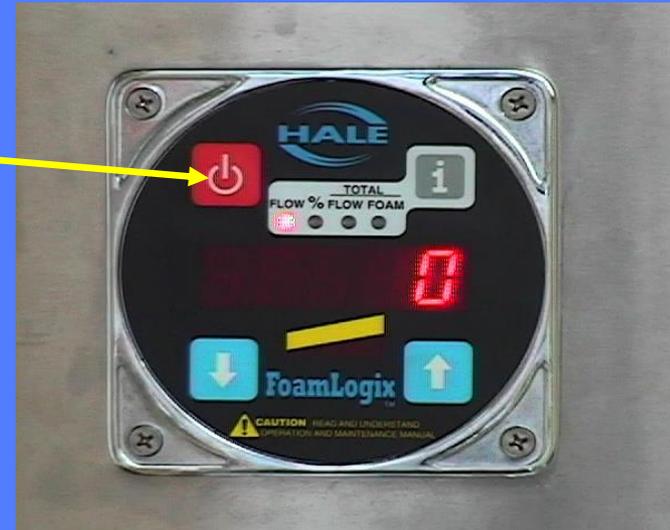


- LED Bar Graph



On/Off Button

- On/Off Control for Foam Pump
- Foam Pump Automatically Powers On with road-to-pump engagement
- Lit LED on bar graph shows you that foam pump is on



Switch Displays Button

- Switches between the 4 informational displays



Informational Display Choices

- Flow
- % (Foam Injection)
- Total Flow
- Total Foam



Info Displays - Flow

- Real-time Flow through the Foam Manifold (gpm, 30-800)
- This is the combined flow through the manifold. So if you have more than one handline off you will have to estimate percentages to figure out what each handline is flowing.
- Read from Paddlewheel Flow Sensor



This number indicates that there is 116 gpm of water flow passing through the foam manifold at this instant in time.

Info Displays - % (Foam Injection Rate)

- #'s to right indicate Foam Injection Rate.
- Default rate will be 0.3%
- Letter to left indicates Foam Tank being used (e.g. "A")



Info Displays - Total Flow

- Indicates (in gals.) running total of water flowed through Foam Manifold
- Starts counting when the system is powered up



Total Foam

- Running total of foam concentrate used (gallons)
- Uses
 - Foam Tank Refill
 - Insurance Company Reimbursement?
 - Usage Tracking in Firehouse



Up and Down Arrows

- Adjust Foam Injection Percentage Rates with the Touch of a Button
- Range of 0.1% to 10.0%
- You will probably not have to change this under normal conditions.



Decrease %

Increase %

LED Bar Graph

- Visual indicator of Foam Pump capacity being used
- Just one LED to left lit up simply means the foam pump is on and supplying concentrate.
- If all the LEDs are lit up all the way to the right, that means that all 5gpm capacity of the foam pump has been used up!



System Zero

- To reset Total Flow and Total Foam
- Press both arrows simultaneously
- This also resets when system is powered down.



CAFSPro Controller



- Power Button
- Switch Displays Button
- Up and Down Arrows
- LED Bar Graph

Power Button



- On/Off Control
- Automatic start when engine is put into pump gear
- Lit LED indicates power on

Switch Displays



- Switch Between the 4 Informational Displays

Informational Displays

Switch Displays Button



- Air Flow (CFM)
- Air/Water Ratio
- Compressor Temperature
- Hours Run

Air Flow (CFM)



- Real Time Air Flow (should be about 1/2 the GPMs of water flow - if flowing wet foam)

Air to Water Ratio



- Ratio of Air Injection to Foam Solution
- (CFM air/GPM water)
- Ranges from .5 (default setting) all the way to 11

Compressor Temperature



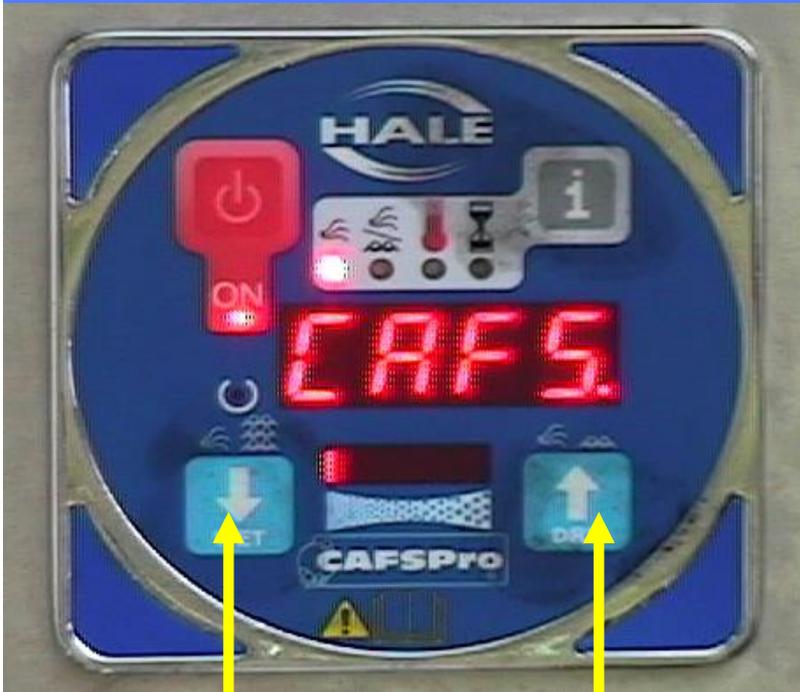
- Temperature in degrees Fahrenheit
- *Here the controller is indicating 161F degrees. This is a good operating temperature.*

Hours Run



- Total Hours the Air Compressor has been running since the system was installed.
- *This compressor has had 15.7 hours of working time.*

Up and Down Arrows



Lessen Air

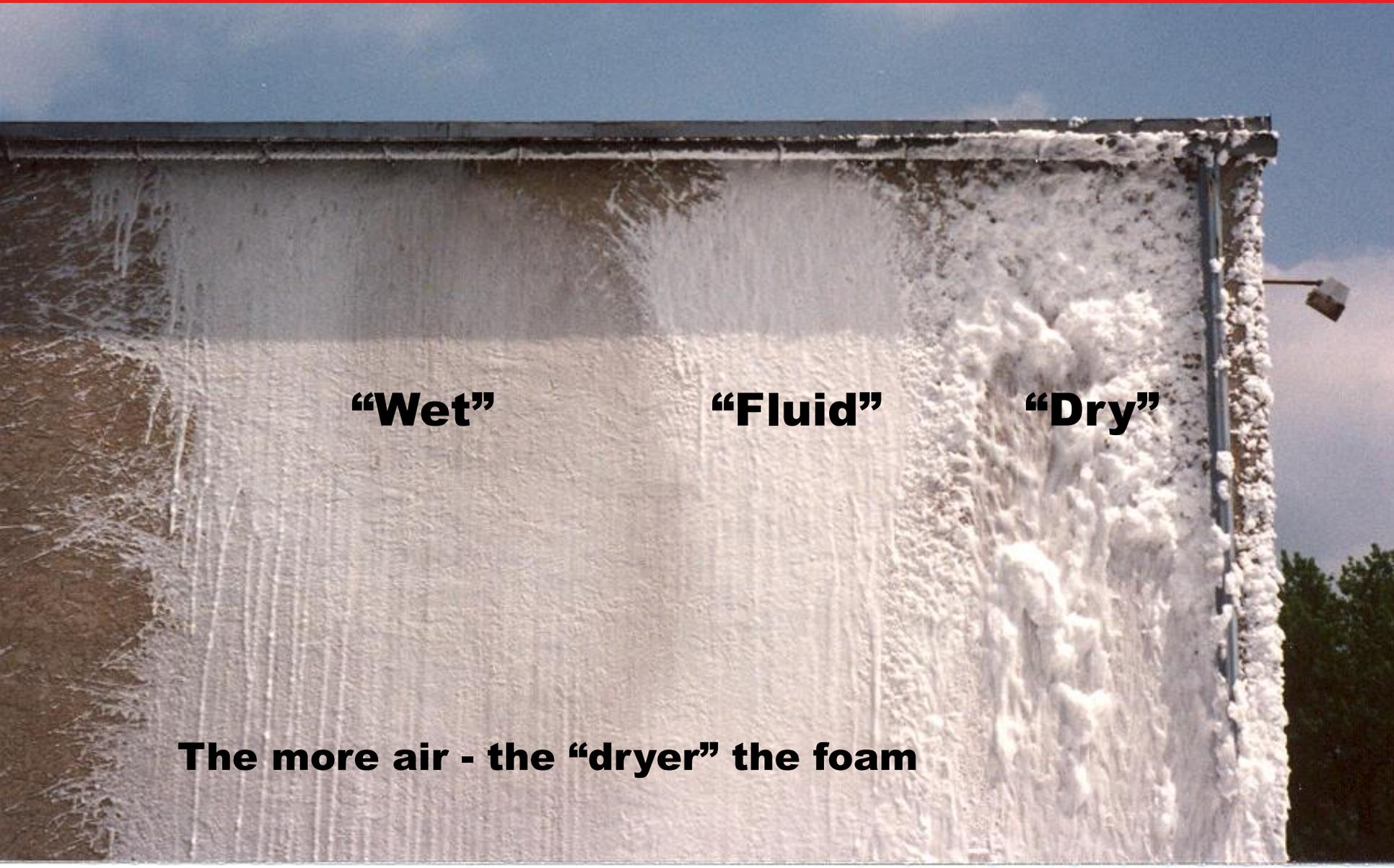
“Wet”

Add Air

“Dry”

- Adjust air/water ratio
- Wet to Dry Range
- The more air is added the “dryer” the foam
- Never increase the air when crews are engaged in interior attack.

Wet to Dry - Controlled by amount of air



“Wet”

“Fluid”

“Dry”

The more air - the “drier” the foam

Available Air / Water Mixtures



- Wet
 - 0.5 scfm / 1 gpm (default)
 - 1.0 scfm / 1 gpm
 - 1.5 scfm / 1gpm



- Medium or Fluid
 - 2.0 scfm / 1 gpm
 - 2.5 scfm / 1 gpm
 - 3.0 scfm / 1 gpm



- Dry
 - 11.0 scfm / 1 gpm



LED Bar Graph

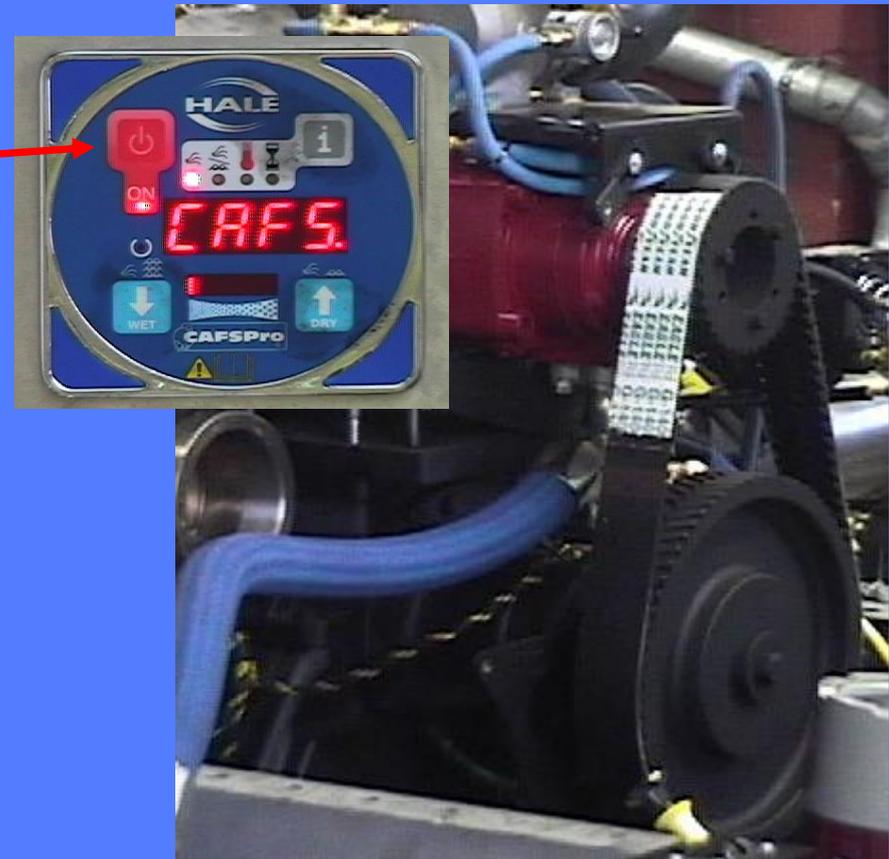


- Visual Indicator of foam consistency (Wet to Dry)

Wet >>>>>>>>> Dry

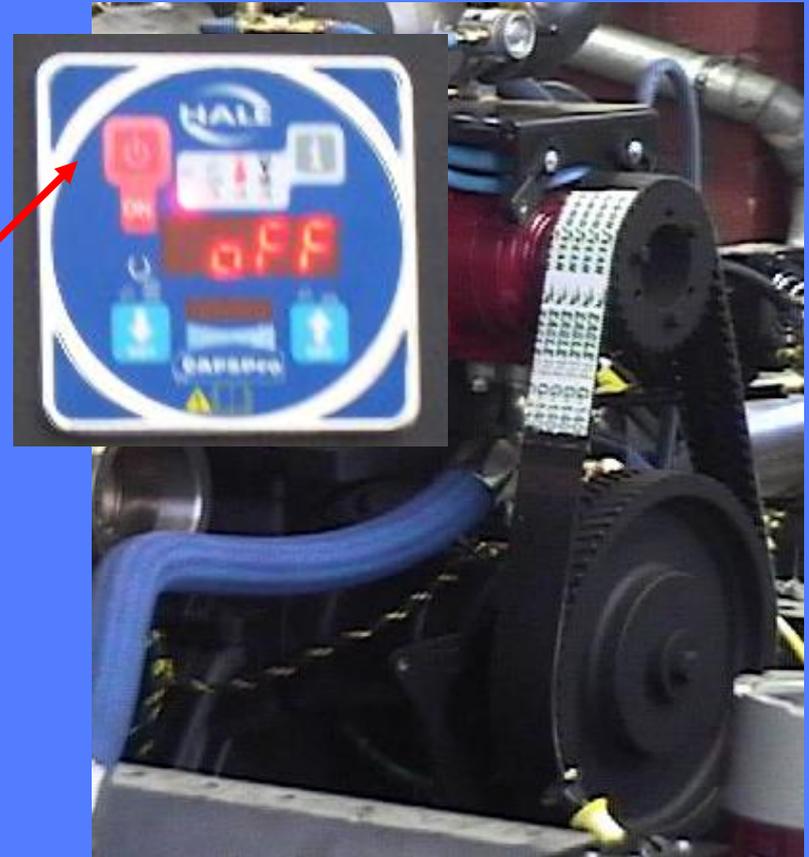
To Put Compressor In Standby Mode

- Compressor is engaged and running
- User taps Power Button once
- Air Injection Valve then closes & Controller indicates “*Stby*”
- Compressor is still turning
- Instant-On if it should be needed



To Turn Compressor Completely Off

- Compressor is engaged and turning
- Reduce engine speed to idle!
- Push on/off button and hold
 - 3 Beeps, & Display shows “3,2,1, oFF”
- Compressor is now not turning



User Off Mode

- After turning air compressor off, pump would need to be throttled back up to move water
- Pump needs to be taken out of gear and re-engaged to bring air compressor back up



Air Compressor Off

When do you need to turn Air Compressor off?

- If you need to pump plain water or foam solution above 150 psi
- If failure of foam system and safety interlocks occurs - slug flow & chatter
- If you run out of foam
- If you are going to be only using water and want to avoid adding hours to air compressor.



Review Questions



- How do you know if the foam pump is on?
How do you turn it off?
- How do you know if the air compressor is on?
How do you put the air compressor on standby? What exactly does this mean?
- How do you turn the air compressor completely off? When should you turn it off?

